

II. AMENDMENTS TO THE CLAIMS

The following listing of claims replaces all prior versions, and listings, of claims in the application:

1. (Currently Amended) A method for communicating electronic mail data from a sender to a receiver via a network, comprising the steps of:

(a) recognizing a dial number of said receiver corresponding to destination address information attached to said electronic mail data;

(b) converting said electronic mail data into an image form permitting facsimile communication, wherein said electronic mail data originates in an electronic mail format;
~~and~~

(c) initiating a call to said receiver using said recognized dial number and transmitting said electronic mail data converted into said image form to the receiver by facsimile communication procedures, and

(d) converting said electronic mail data converted into said image form back wherein said image form is adapted to be restored into electronic mail data in the electronic mail format.

2. (Original) The method as set forth in claim 1, wherein the step of converting comprises the step of determining a horizontal number of pixels and generating data by linking the data with the horizontal number in a vertical direction according to a specification based on ITU-T Recommendation T-30.

3. (Original) The method as set forth in claim 2, wherein the step of converting further comprises the step of generating data to be transmitted by using a mail body in which said electronic mail data are recognized to be a series of binary values, a header representing said image form, and a padding for linking the mail body and the header by adjusting line width of the horizontal numbers of pixels.

4. (Currently Amended) An electronic mail communicating method, comprising the steps of:

- (a) retrieving mail information stored in a server to be transmitted over a switched line from the server, wherein the mail information originates in an electronic mail format;
- (b) selecting a specification of communication needed for communication over the switched line from a network address contained in said mail information; and
- (c) initiating a call to said switched line using the selected specification of communication, and transmitting said mail information according to facsimile communication procedures to a receiving apparatus connected via the switched line; and

(d) forwarding said mail information from the receiving apparatus to the network address according to the electronic mail format.

5. (Original) The electronic mail communicating method as set forth in claim 4, wherein the step of retrieving comprises the step of retrieving said mail information with recognition that the mail information is to be transmitted from said network address via said switched line.

6. (Currently Amended) An electronic mail communicating method, comprising the steps of:

(a) receiving data containing electronic mail information converted from an electronic mail format into an image form permitting facsimile communication from a sender, wherein said electronic mail information originates in ~~an~~ the electronic mail format;

(b) converting said received data into electronic mail information;

(c) analyzing a destination contained in the converted electronic mail information;

(d) generating reply information to converted electronic mail information; ~~and~~

(e) converting said reply information into said image form and sending the converted reply information to the sender.

7. (Original) The electronic mail communicating method as set forth in claim 6, wherein, if a terminal with a destination corresponding to said analyzed destination is not connected to an internal network, reply information representing absence of any relevant destination is generated.

8. (Original) The electronic mail communicating method as set forth in claim 6, wherein, if received data do not contain electronic mail information, conventional facsimile reception operation takes place.

9. (Currently Amended) An electronic mail transmitting apparatus for transmitting electronic mail data to a receiver using a switched line not through the Internet, comprising:

a communication specification determination unit for determining a specification of communication with said receiver for communication over said switched line based on destination address information for an external network assigned to the electronic mail data;

a conversion unit for converting electronic mail data to be transmitted into a data form for communication over said switched line, wherein said electronic mail data originates in an electronic mail format; ~~and~~

a transmission unit for transmitting said electronic mail data converted into said data form by said converting unit, to said receiver in accordance with said specification of communication determined by said communication specification determination unit,

using said switched line[.]; and ~~wherein said data form for communication over said switched line is adapted to be restored into electronic mail data in the electronic mail format~~

a reconversion unit for converting said electronic mail data converted into said data form that has been received over said switched line into electronic mail data in the electronic mail format.

10. (Original) The electronic mail transmitting apparatus as set forth in claim 9, wherein said communication specification determination unit stores in advance correspondence information among destination address information for a network assigned to electronic mail data, a dial number of said receiver and a communication procedure based on ITU-T Recommendation T-30, and determines the specification of communication based on the stored correspondence information.

11. (Original) The electronic mail transmitting apparatus as set forth in claim 9, wherein said conversion unit recognizes data contained in said electronic mail data as a series of binary values, and converts the data form by adjusting line widths.

12. (Currently Amended) An electronic mail transmitting apparatus, comprising:

a mail retrieving unit for retrieving from a server mail information to be transmitted over a switched line, wherein said mail information originates in an electronic mail format;

a communication specification determination unit for determining a specification of communication for communication over the switched line based on a network address contained in said mail information retrieved by said mail retrieving unit; and

a transmission unit for initiating a call on said switched line using said specification of communication determined by said communication specification determination unit and transmitting said mail information to a receiving apparatus connected via the switched line by facsimile communication, wherein the receiving apparatus converts the mail information back into the electronic mail format.

13. (Currently Amendedd) A mail receiving apparatus for receiving electronic mail data originating in an electronic mail format that has been converted into a form permitting facsimile communication from a sender via a switched line, comprising:

a receiving unit for receiving data from said sender via said switched line by facsimile communication;

a restoring unit for restoring said data received by said receiving unit into electronic mail data; and

a transferring unit for transferring said electronic mail data restored by said restoring unit to a server connected to an internal network.

14. (Original) The electronic mail receiving apparatus, as set forth in claim 13, further comprising: a destination recognition unit for recognizing a destination of the electronic mail data based on said electronic mail data restored by said restoring unit; and a notification unit for notifying the sender if the destination recognized by said destination recognition unit is not in said internal network.

15. (Currently Amended) An electronic mail communication system, comprising: an Internet-connected transmission mail server; a transmission client connected to the transmission mail server to instruct transmission of electronic mail, and a transmission agent connected to a switched line to function as a client to the transmission mail server,

wherein said transmission client outputs, to said transmission mail server, electronic mail data in an electronic mail format that includes a description of a destination of said transmission agent and a description of a final mail destination; and

wherein said transmission agent retrieves electronic mail data in which the destination of the transmission agent is described by said transmission client from said transmission mail server and transmits the electronic mail data using facsimile communication procedures using the switched line to a receiving apparatus that reconverts the electronic mail data into an electronic mail format.

16. (Currently Amended) An electronic mail communication system for transmitting and receiving electronic mail information between an internal network on a sender side and an internal network on a receiver side, wherein

the internal network on the sender side comprises a transmission mail server, a transmission client for generating electronic mail information, and a transmission agent which is a client having a function for transmitting the electronic mail information in a facsimile format via a switched line;

the internal network on the receiver side comprises a reception mail server, a reception client which is a final destination of the electronic mail information, and a reception agent which is a client having a function for receiving the electronic mail information via a switched line;

said transmission agent transmits an electronic mail message whose final destination is said reception client designated by said transmission client to said reception agent via said switched line;

said reception agent transfers said electronic mail received via said switched line to said reception mail server in an electronic mail format.